

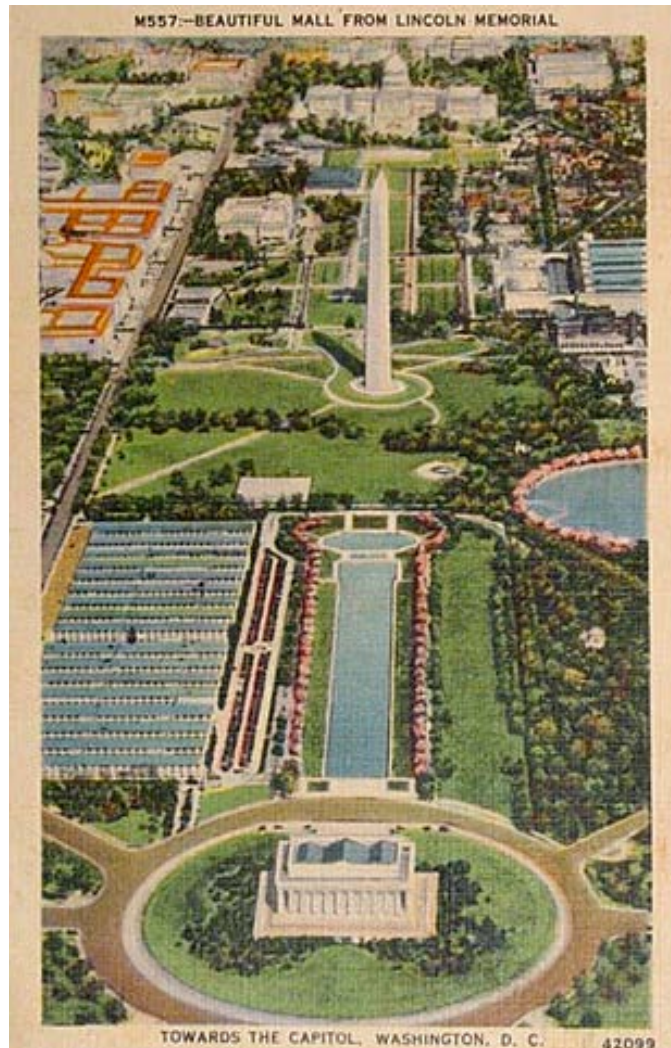


Central Avenue over Fall Creek

Rehabilitation of Central Avenue
Historic Stone Arch

March 7, 2018

Historic Context



City Beautiful Movement

Historic Context



George Kessler and the Indianapolis
Park & Boulevard System

Historic Context



Emerichsville Bridge, 1908



College Avenue Bridge, 1907



Delaware Street Bridge, 1924



Capitol Avenue Bridge, 1911



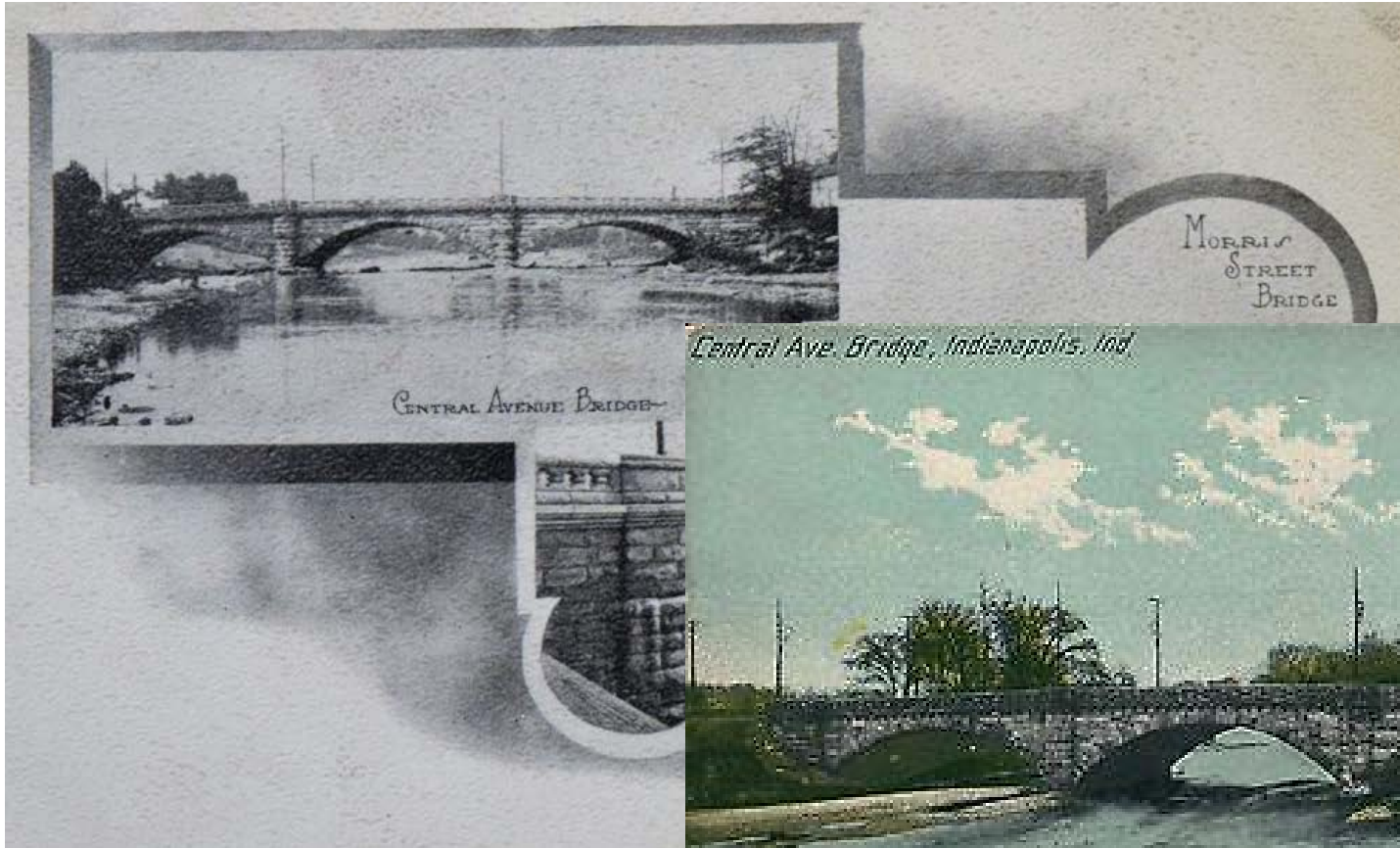
Meridian Street Bridge, 1927



30th Street Bridge, 1910s

Indianapolis Bridges

Central Avenue Bridge



c. 1905

c. 1912



Central Avenue Bridge



1920s

Central Avenue Bridge



2016

Environmental Process

“Select” Bridge as designated in the Indiana Historic Bridge Inventory

Section 4(f) Alternatives Analysis:

A. No Build/Do Nothing

B. Rehabilitation for Continued Vehicular Use (concrete arches) Meeting the Secretary of Interior’s Standards for Rehabilitation

C. Rehabilitation for Continued Vehicular Use (stone arches) Meeting the Secretary of Interior’s Standards for Rehabilitation

Environmental Process



Consulting Parties:

State Historic Preservation
Officer (SHPO)

Indiana Landmarks

Historic SPANs Taskforce

Destination Fall Creek

City of Indianapolis Parks and
Recreation Department

Indianapolis Historic
Preservation Commission

Dr. James Cooper

Environmental Process

- Crashworthy Bridge Railing in front of sidewalk.
- Environmental Commitment historic railing must be 6 in. taller than new railing.



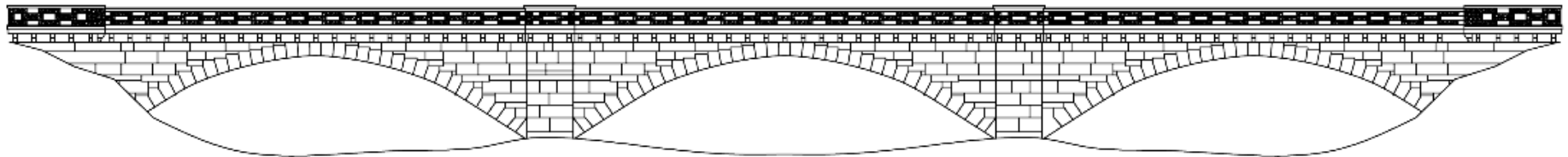
Environmental Process



Mitigation- College Avenue

The Engineer's Perspective

- Inspection/Testing
- Design
- Construction
- Lesson Learned



Bridge Inspection

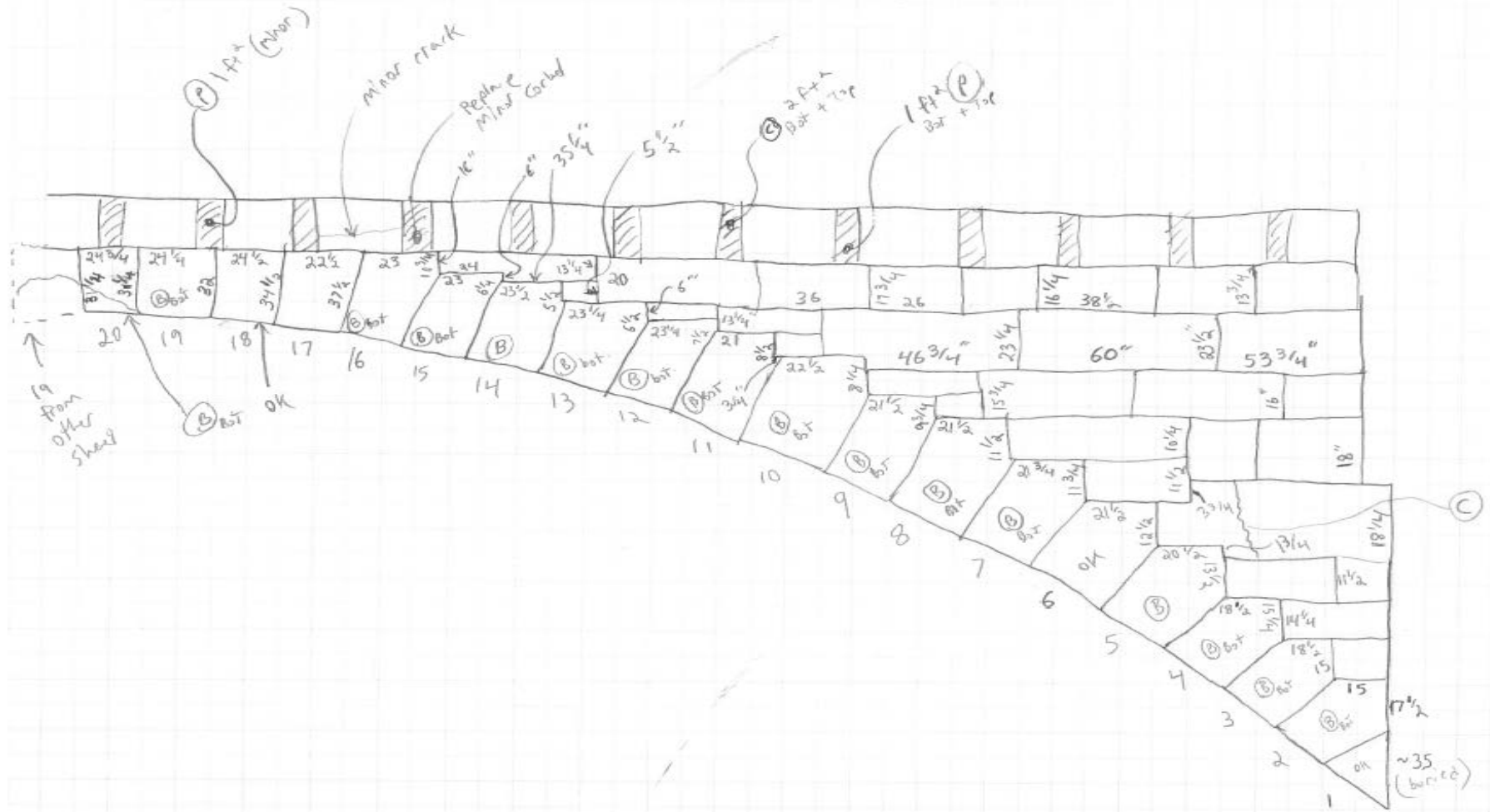


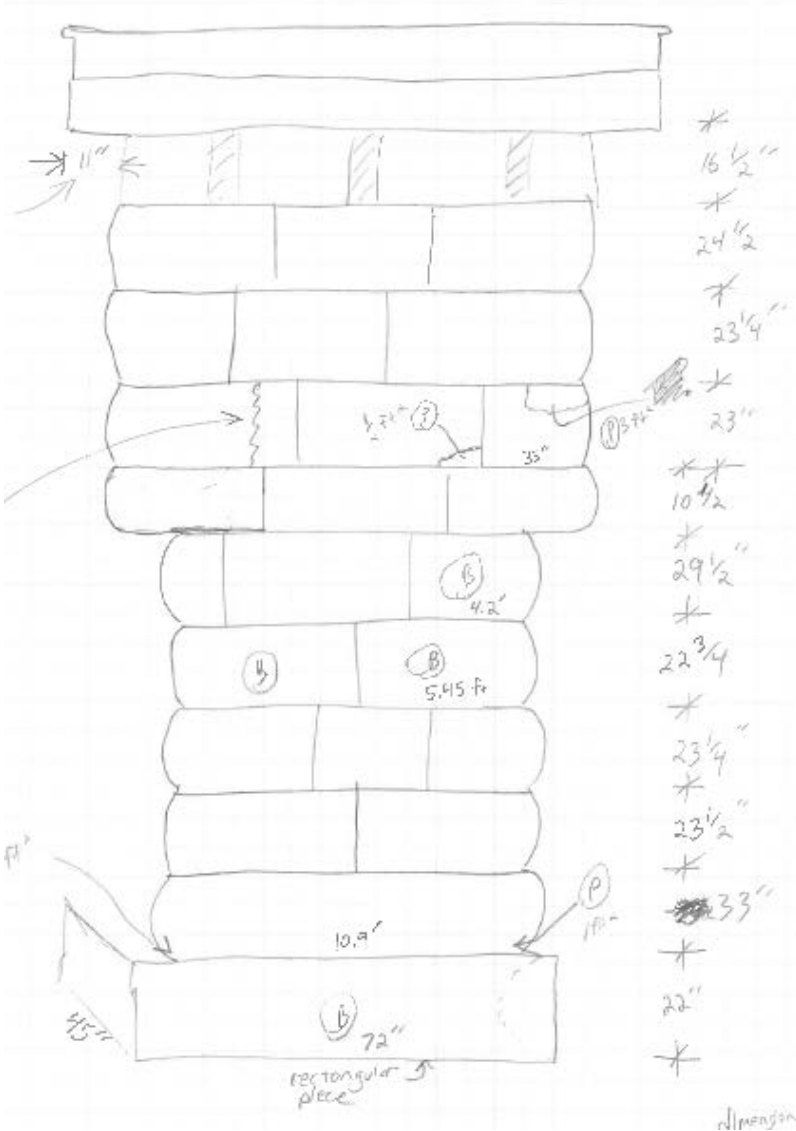
Bridge Inspection

- LOTS OF MEASURING....



Bridge Inspection





Bridge Inspection

- Already some deficiencies.



Bridge Inspection

- Span A Underside



Bridge Inspection

- Span B Underside



Bridge Inspection

- Span C Underside



3/ 8/2013

Bridge Inspection

- Damage to Historic Railing



Bridge Inspection

- Took cores of the foundation to verify its integrity



Bridge Design

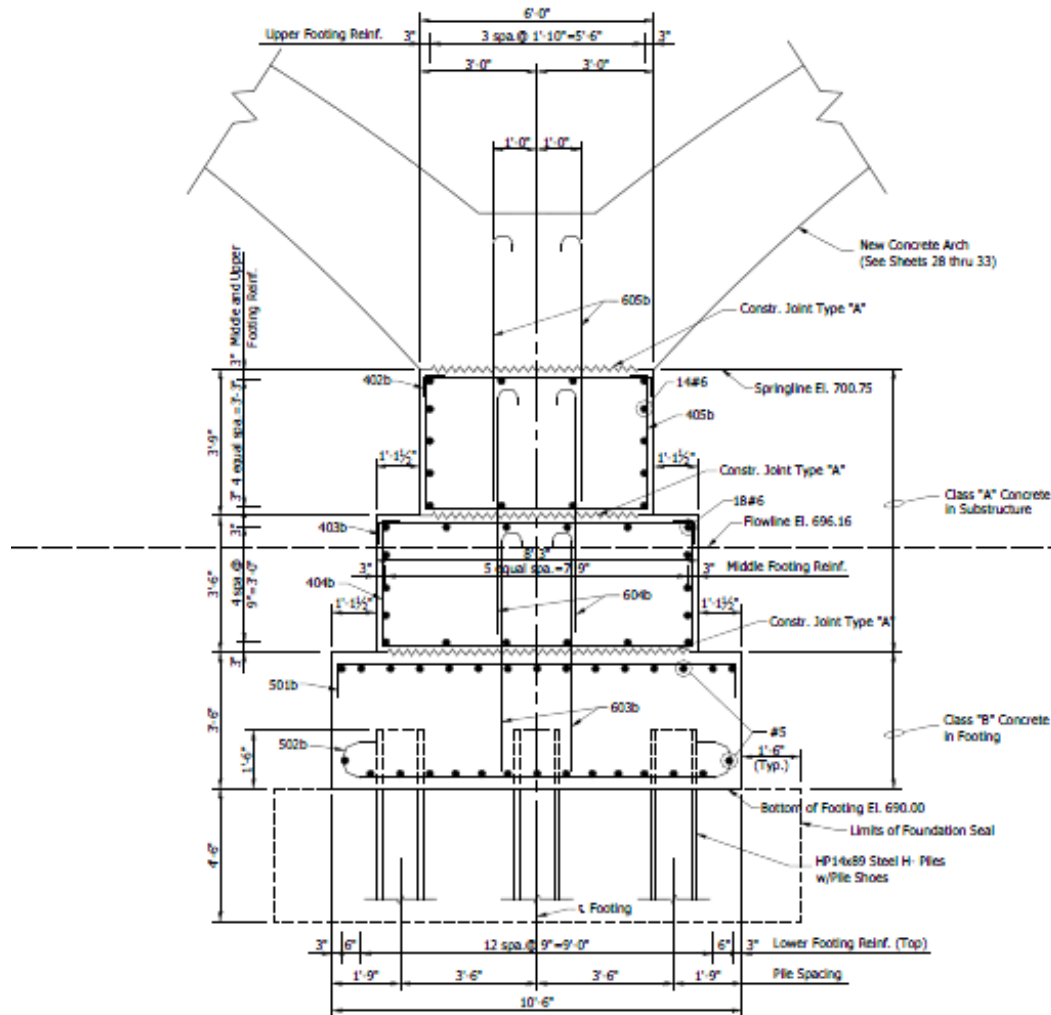
Revised Scope of Work:

- Foundations in need of replacement



Bridge Design

- Bridge foundation or wedding cake?



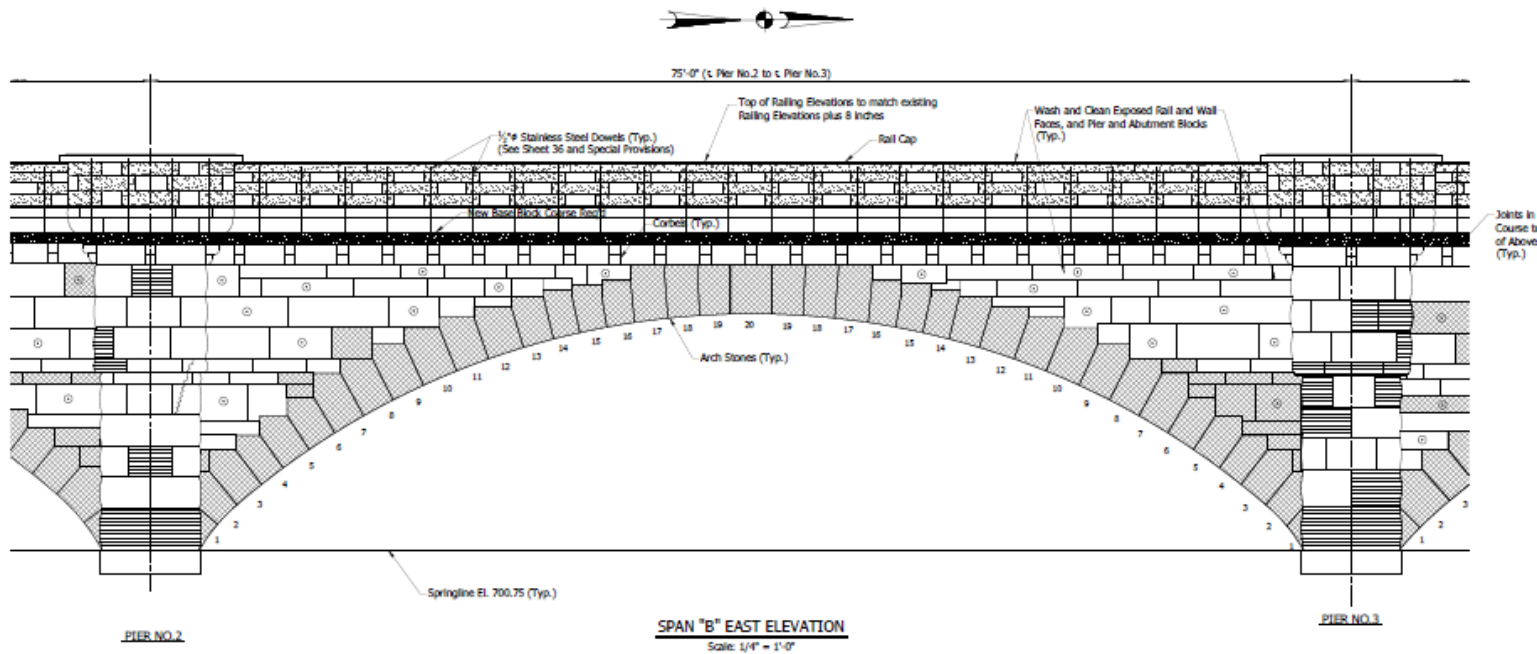
Bridge Design

- Cast in Place Arches with a Precast Alternative



Bridge Design

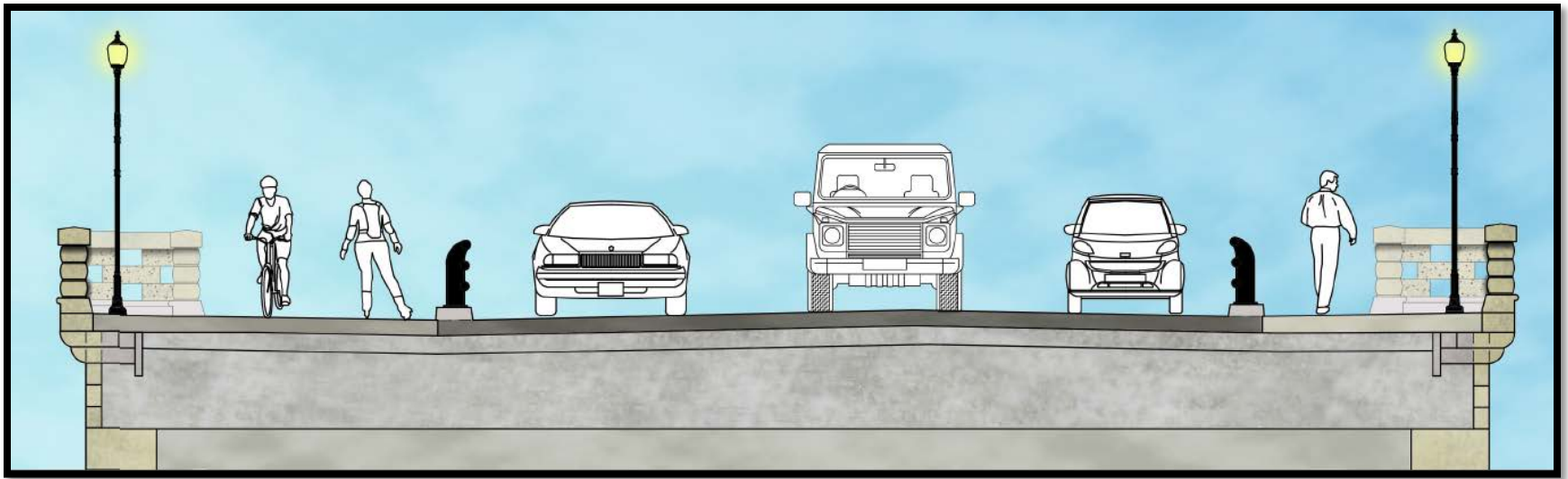
- It's a life size puzzle....



Bridge Design

- Water and salt infiltration a major contributor to deterioration of existing bridge.
- Drainage a major focus of design
- Entire Deck and Sidewalk Concrete
- Waterproofing Membrane
- Drains within arch fill

Bridge Design



Bridge Design

- College Avenue became part of Contract



Bridge Design

College Avenue Scope of Work:

- Hydro demolition and Bridge Deck Overlay.
- Foundation Unknown, scour protection.
- Drains on bridge deck. Outlet at high point of arch.

Construction



- Project let to ICC in November 2016 (formerly Illinois Constructors) for \$6.2 million
- Engineer's Estimate \$6.9 million for College and Central Avenue
- Construction funding 80% INDOT, 20% Indy DPW

Construction

- Pre-Construction Meeting on Thursday, January 12th, 2017.
- Contractor planned to finish College first, then close Central in the Summer 2017.



Construction



Construction



Construction



Construction



Construction



Construction

- Contractor had to alter their schedule. Work on Central first.
- Contractor had to rethink their demolition plan
- Part of detour route was utilizing Fall Creek Parkway. Lanes closed along Fall Creek due to Citizens work.
- Worked quickly to update detour route.

Construction

- The demolition.... Or careful deconstruction...

May 2017



Construction

June 15, 2017



Construction

June 29, 2017



Construction

August 31st, 2017



Construction

September 11th, 2017



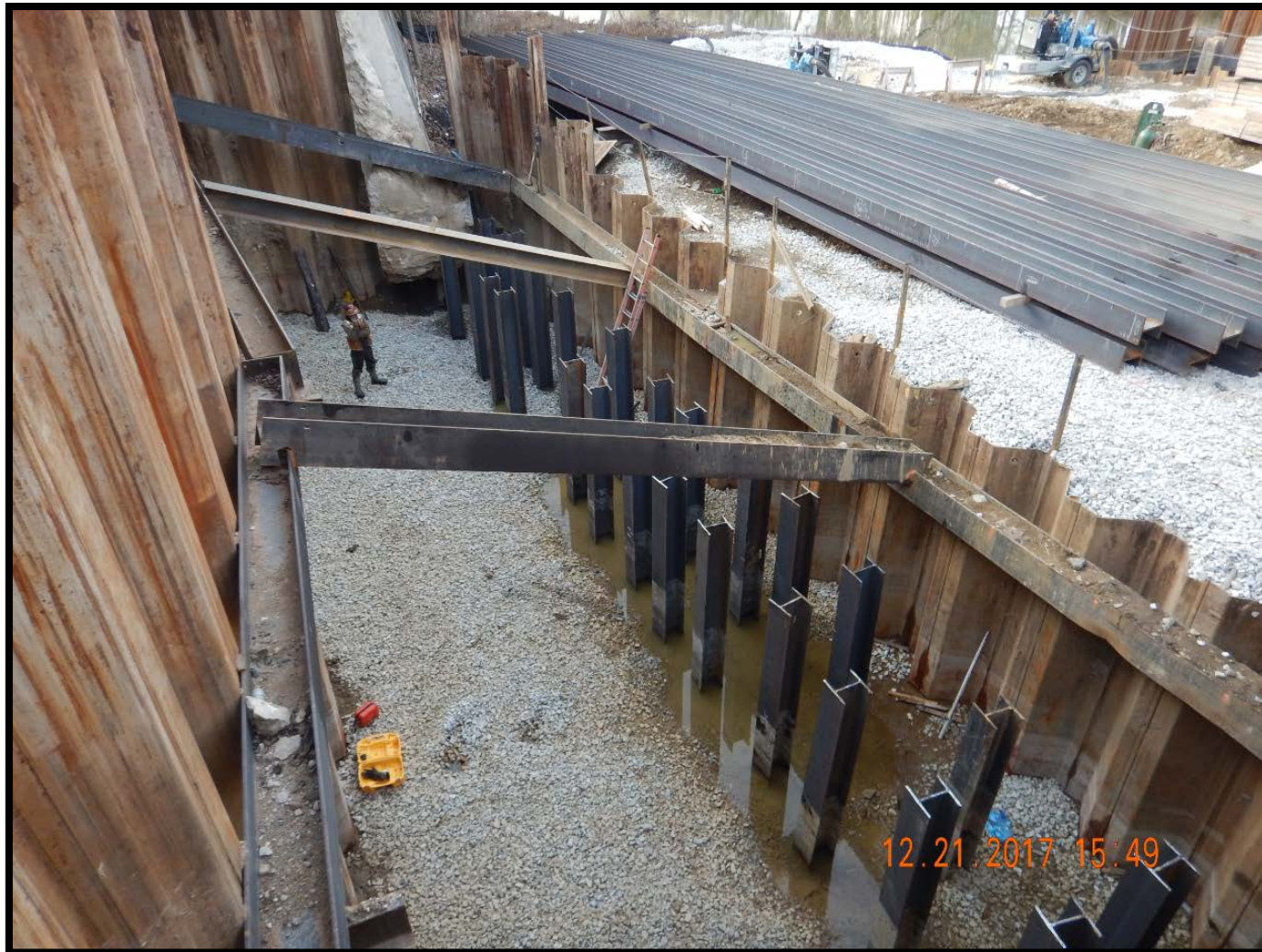
Construction



Demolition of Span A

Construction

Piles at End Bent



Construction

Piles at Pier



Construction

- Abutment #1 and Pier #2 poured in February.
- Finish Pier #3 and Abutment #4 in March.
- Place Pre-Cast Arch Beams in April.
- Anticipated completion date November 2018.

Construction



Lessons Learned

- Working on rehabilitation of 30th St. Bridge



Questions???

